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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/824,340

04/14/2004

Charles W. Extrand

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5391

24113

7590

08/15/2006

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EXAMINER

MENON, KRISHNAN S

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 08/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/824,340

Applicant(s)

EXTRAND, CHARLES W.

Examiner

Krishnan S. Menon

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Claims 1-10 are pending as amended 8/2/06

#### ***Election/Restrictions***

Applicant's election with traverse of claims 1,2,4,6 and 8-10 in the reply filed on 8/2/06 is acknowledged. The traversal is on the ground(s) that the examiner has not shown any serious burden of search. This is not found persuasive because the election is for patentably distinct species, and Applicant has not declared or shown that the species are not patentably distinct. However, the restriction requirement for the species "shapes" from ***cylindrical, cylindroidal, square or polyhedron*** is hereby withdrawn, since applicant has not disclosed any criticality for any particular shape in applicant's specification (page 13, line 6). Claims 1,2 and 5-10 will be examined. Claim 3 is withdrawn from consideration. Restriction between the [hollow] fiber membrane and film membrane is proper because of the structural difference.

The requirement is still deemed proper and is therefore made FINAL.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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1. Claims 1,2 and 4-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Seita et al (US 5,094,749).

Seita teaches a microporous hydrophobic membrane (material polyolefin) comprising the body portion having a liquid contact surface and opposing gas contact surface, the liquid contact surface having multiplicity of uniformly spaced asperities - see figures and col 6 line 29 - col 11 line 30, particularly, column 7 lines 1-35. Re the contact line density, and the height, by the definition given by the equations, this membrane would have such a contact line density for a liquid, because the claim does not specify any liquid for which the contact line density is determined. Column 7 lines 1-35 teaches ranges of heights and line densities.

Re the sizes, shapes and pattern of asperities, the reference teaches that shape is not critical, the size and pattern depend on the need - see col 7 lines 1-35. The ref also teaches selecting the sizes and patterns. Applicant's specification, page 13, starting at line 6 describes that asperities can be of a wide variety of shapes, but does not describe any criticality for any particular shape.

2. Claims 1,2,4,5,8,9 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,724,673 (RYON).

Ryon teaches a microporous membrane comprising the body portion having a liquid contact surface and opposing gas contact surface, the liquid contact surface having multiplicity of uniformly spaced asperities. Re the contact line density, by the definition given by the equation, this membrane would have such a contact line density

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for a liquid, because the claim does not specify any liquid for which the contact line density is determined. See figures and column 4 lines 1-60.

Re the sizes, shapes and pattern of asperities, the reference teaches conical or hemispherical shape (polyhedron with infinite sides) and rectangular pattern, and also selecting the sizes and patterns.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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8/13/06

Krishnan S Menon  
Examiner  
Art Unit 1723